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May 26, 2005



Ms. Mara Seeley
Gradient Corporation
20 University Road
Cambridge, MA 02138

Subject: Comments on the draft Human Health Risk Assessment (HHRA) Workplan
Smelter/Tailing Soils Investigation Unit (S/TSIU)
Chino Administrative Order on Consent (AOC)

Dear Ms. Seeley:

The New Mexico Environment Department (NMED) received the HHRA workplan for the S/TSIU on March 20, 2005. An initial review of that document has been completed by the NMED and the comments below, including input from the U.S. Environmental Protection Agency (EPA) Region VI, must be addressed before the NMED will consider approval of this document.

General Comments:

1. Exposure to lead should be evaluated separately using the EPA IEUBK lead model. A section should be developed to evaluate risk from lead exposure (EPA, GC1).
2. The number of samples in each exposure area should be identified and checked for its adequacy to represent that area (EPA, GC2).

Specific Comments:

1. Page 1: Revise the fourth sentence of the second paragraph to read, "As specified in ... will be performed to determine ~~both the actual and~~ potential risks ... Soils IU."
2. Page 2, Section 2.2: Revise the first and second sentences to read, "~~Because the RI Workplan for the Smelter/Tailing Soils IU has not been finalized,~~ Gradient ~~will have~~ *had* an opportunity to provide input regarding the number and location of environmental samples collected at the Smelter/Tailing Soils IU ~~and Gradient has already~~ participated in data quality objective (DQO) working sessions ... data needs for the HHRA."

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3. Page 2, Section 2.2: Revise the third sentence to read, “~~Once SRK has prepared the draft RI Workplan,~~ Gradient ~~will reviewed the draft RI Workplan and provided feedback as necessary.~~”
4. Page 3: Add a reference or explanation, to the last paragraph, regarding the reference samples.
5. Page 6, Section 2.4.2.2: The equation provided is not suitable to evaluate the difference between onsite and background data. The distribution of the two data sets should first be evaluated and then a statistical evaluation of the difference between the means of the onsite and background data should be done. Different statistical tests are available to test the hypothesis that the two data sets are different with a confidence level of 95% (EPA, SC1).
6. Page 7, Section 2.4.2.3: first paragraph, second sentence, drop the word “possibly”.
7. Page 10, Section 3.2: First paragraph, 11th sentence, drop the second half of this sentence, “and the grade is steep enough such that...”.
8. Page 10, Section 3.2: Second paragraph, list of exposures, add the “industrial worker”.
9. Page 11, Section 3.3.1, second paragraph, drop the fifth sentence about “the shallow caliche layer”.
10. Page 12, Section 3.3.2: Due to the tailing material distribution on and along the access roads it may be prudent to include resuspension of particulate matter due to traffic (EPA, SC2).
11. Page 13, Section 3.3.5: Plant uptake models/values taken from the literature may not represent site specific soil conditions. This issue should be addressed in the uncertainty section (EPA, SC3).
12. Page 13, Section 3.3.7: It is not clear if site specific data will be used (EPA, SC4); the Site-wide Ecological Remedial Investigation (ARCADIS, 2001) contains vegetation and soil data that may be useful.
13. Page 14, Section 3.4: Add the “future resident” to the second sentence of the paragraph beginning, “As described above” This will be consistent with Page 10.
14. Page 18, Section 3.5.2: A statement indicates that air concentrations will be modeled based on one year of data. Five years of meteorological data is recommended for modeling a good cross section of conditions (EPA, SC6).
15. Page 20, Sections 3.5.6 and 3.5.7: Provide references for the transfer factors (EPA, SC7).
16. Page 24-25, Sections 3.6.6-3.6.9: Provide references for the intake equations (EPA, SC8).
17. Page 24, Section 3.6.6: Delete the first “and” in the first sentence.

18. Page 35, Section 6: Delete one of the words "Soils" from the table heading.
19. Page 42, Table 3-3a: The RME values are the same as the CT values on Page 58 for "Surface Soil Ingestion Rate" and "Soil/Skin Adherence Factor".
20. Page 50: The RME value for "Chicken Ingestion Rate" is the same as the CT value on Page 66.
21. Page 52: The "Ingestion of Surface Soil, Averaging Time-Noncancer" comment states an 11-year exposure; please verify.
22. Page 56: The three "Exposure Frequency" RME values are less than the CT values on Page 72.
23. Page 26, Section 3.7: Second paragraph, drop the fifth sentence about using the Hurley bioaccessibility study, as the study is specific to on the HSIU.
24. Page 29, Section 4: 7th paragraph (begins with "...If copper is identified..."), please update per conclusion of all dispute resolution (copper RAC) activities for the HSIU.
25. Page 30, Section 4: second full paragraph on the page, the fourth sentence begins with "We will determine the forms of chromium likely to be present...". Please add reference to how speciation will be performed.
26. Page 32, Section 5.2, second paragraph, please clarify that the equation is for both oral and dermal and, if applicable, illustrate the dermal absorption fraction.
27. Page 57: The "Exposure Frequency" RME value is less than the CT value on Page 73.
28. Tables 3-3 (a-f) and 3-4 (a-f), Summary of Exposure Factors: comments 25 through 31 below point out some specific errors in the tables and may not necessarily be a comprehensive list of needed changes. Please thoroughly review and revise these tables as necessary. Additionally, be sure to add "industrial worker" to the list and descriptions of exposure scenarios.
29. Tables 3-3 (a-f) and 3-4 (a-f), Summary of Exposure Factors: It appears Gradient used nationwide per capita intake rates of the food stuffs (vegetables, fruits, poultry, eggs, and beef cattle) as opposed to consumer intake of homegrown vegetables for the Western U.S. The NMED believes a more realistic yet conservative, and regional specific, assessment would be produced by incorporating the consumer intake of homegrown vegetables for the Western U.S. Please revise.
30. Page 57: The "Surface Water Dermal Exposure Time" is missing.
31. Page 59: The "Groundwater Dermal Exposure Time" value of 0.33 is labeled as the "RME".

Please revise the document with these changes and resubmit to the NMED.

If you have any questions call me at 505-827-1046, or Phil Harrigan at 505-388-1934.

Sincerely,

A handwritten signature in black ink, appearing to read "Eustice". The signature is fluid and cursive, with a large initial "C" and "E".

Chris Eustice, Chino AOC Project Manager
Mining Environmental Compliance Section
Ground Water Quality Bureau

Cc: Phil Harrigan, NMED
Mary Ann Menetrey, NMED
Petra Sanchez, USEPA